

REMARKS

Claims 27-30, 32-36, 38-43, 45-49 and 51-59 are pending in the application.

Claims 27-30, 32-36, 38-43, 45-49, and 51-59 stand rejected.

In the Final Office Action dated May 31, 2005 (“the Office Action”), claims 27-30, 32-36, 38-43, 45-49, and 51-59 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 6,195,553 to Claffery et al. (“*Claffery*”), in view of U.S. Patent No. 5,596,719 to Ramakrishnan et al. (“*Ramakrishnan*”), and further in view of U.S. Patent No. 6,058,103 to Henderson et al. (“*Henderson*”), in view U.S. Patent No. 6,212,171 to LaFollette et al. (“*LaFollette*”).

*The Office Action Does Not Provide Motivations
for the Proposed Combinations of References.*

Appellant respectfully submits that the Office Action fails to state a *prima facie* case of obviousness under § 103(a). The Office Action fails to provide, as set forth in MPEP § 2143, a required suggestion or motivation “either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.”

References may be combined in a rejection under § 103(a) “where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” MPEP § 2143.01. “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” *Id.* (emphasis added).

Claim 27 is directed to a computer system and includes limitations of computer code configured to cause a processor to identify pairs of a network elements as being in a first set of network element pairs, generate a first matrix comprising independent rows and non-independent rows, measure a measured network performance metric between a first network element and a second network element of each network element pair in a

second set of network element pairs, and compute a computed network performance metric between a first network element and a second network element of a remaining network element pair in the first set of network element pairs using at least one of the measured network performance metrics, wherein the remaining network element pair corresponds to a non-independent row of the first matrix. As noted in the Office Action, these limitations are not disclosed in *Claffery*. Office Action at 4, para. 11. The Office action proposes that a combination of *Claffery* with *Ramakrishnan*, *Henderson*, and *LaFollette* discloses all the limitations of claim 27.

In its discussion of independent claim 27, the Office Action does not provide adequate motivations or suggestions for combining (a) *Ramakrishnan*, or (b) *Henderson*, or (c) *LaFollette* with *Claffery* (or with each other) to support the pending rejection. The Office Action states that “[i]n this case, the references themselves provide motivation or a suggestion to combine the reference.” Office Action at p. 2, para. 5. Applicant respectfully disagrees.

“The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done.” MPEP § 2142 (emphasis added). The Office Action does not meet this burden.

With respect to (a) *Ramakrishnan*, the Office Action analyses the reference in terms of “substituting equivalents.” Office Action at p. 4, paras. 12-13. This analysis is addressed below. The Office Action does not, however, set forth a motivation for the proposed combination of *Ramakrishnan* with *Claffery*, and Applicant sees no such motivation in either *Claffery* or *Ramakrishnan*.

With respect to (b) *Henderson*, the Office Action does not set forth a motivation for the proposed combination of *Henderson* with *Claffery*. The Office Action refers to column 18 of *Claffery* as having a suggestion for the proposed combination to “aid in measuring performance metrics.” Office Action at 5, para. 15. This statement appears to be in error. The *Claffery* reference ends in column 12. *Claffery* does not have a “column 18.” Further, *Claffery* does not discuss the measurement of performance metrics. Thus, the stated motivation for combining references is not actually present in *Claffery*.

Applicant respectfully requests clarification of the grounds for rejection of claim 27 and a withdrawal of the finality of the Office Action so that Applicant may have an appropriate opportunity to address the rejection. In its present form, the Office Action as does not set forth a motivation for the proposed combination of *Henderson* with *Claffery*, and Applicant can find no such motivation in either *Henderson* or *Claffery*.

With respect to (c) *LaFollette*, the Office Action notes that *Claffery* does not disclose computer code for measuring a measured network performance metric and computing a computed network performance metric as set forth in claim 27. Office Action at p. 4, para. 11. The Office Action proposes, however, that such techniques are disclosed in *LaFollette*, and suggests that it would have been obvious to modify *Claffery* accordingly, “since *LaFollette* states at column 6, lines 26-40 that such a modification would provide an accurate measure since the measure node is not on the path that connects the network element pairs.” Applicant respectfully disagrees.

Applicant respectfully submits that even assuming the Office Action’s characterization of *LaFollette* and *Claffery* is correct (and Applicant does not concede this point), this observation does not provide a reason to read either reference in combination with the other. At most, the Office Action points out a statement in *LaFollette* regarding a benefit of *LaFollette*.

The cited portion of *LaFollette* follows.

As shown in FIG. 3 and described above, the measuring node determines a round-trip delay for each pair of leaf nodes in a network at step 302. The technique used to determine the round-trip delay, however, varies according to where the measuring node is located with respect to the leaf nodes. The possible topologies resolve into three categories:

1. The measuring node is a leaf and the round-trip delay is to be measured to another leaf;
2. The measuring node is not a leaf but is on the path that connects two leaves whose round-trip delay is to be measured; and
3. The measuring node is neither a leaf nor on the path that connects two leaves whose round-trip delay is to be measured.

With respect to topology 1, assume that nodes B, C and D are not present, that is, node M and node A are leaf nodes.

LaFollette at col. 6, lines 26-41. This cited passage indicates three categories of determining round-trip delay between pairs of leaf nodes in a network. This passage does not provide a motivation that would prompt a reader to seek the teachings of *Claffery*. Rather, this observation notes an aspect of *LaFollette* that is unrelated to the teachings of *Claffery*.

Further, the cited portion of *LaFollette* does not in fact “state[] that . . . such a modification would provide an accurate measure,” as indicated by the Office Action. Applicant also sees no other aspects of *LaFollette* that would provide a motivation to a person skilled in the art to combine this reference with *Claffery*.

Applicant notes that all three proposed combinations (a), (b), and (c) are required to support the rejection of independent claim 27 in the Office Action. Applicant submits that for the foregoing reasons, the Office Action does not provide a proper suggestion or motivation, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to make the combinations of the cited references as proposed in the rejection of claim 27. Thus, the Office Action fails to state a *prima facie* case of obviousness with respect to claim 27. Independent claim 27 and all claims that depend therefrom are therefore allowable under § 103(a). At least for similar reasons, independent claims 40 and 53 and all claims that depend therefrom are also allowable under § 103(a).

The Rejections are Based on an Improper Application of Smith v. Hayashi.

The Office Action proposes that in view of *Ramakrishnan*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to identify pairs of network elements as being in a first set of network element pairs, as set forth in claim 27, because this activity involves a substitution of equivalents known for the same purpose. Office Action at p. 4, paras. 12-13. In support of this argument, the Office Action cites MPEP § 2144.06 and *Smith v. Hayashi*, 209 U.S.P.Q. 754 (Bd. of Pat. Inter. 1980).

The rule in *Smith v. Hayashi*, however, does not apply in this case. This rule is discussed in MPEP § 2144.06 as pertaining to situations in which (a) an invention matches the prior art except for an element that has been substituted, and (b) the

substituted element is a known equivalent of the prior-art element, and (c) the substituted element has the same purpose as the prior-art element.

In *Smith*, two photoconductors were known in the art of electrophotography, and functioned as equivalents in the claimed environment. On these facts, an electrophotographic invention that substituted one of the photoconductors for the other was obvious.

Assuming the Office Action's characterization of the cited references *Ramakrishnan* and *Claffery* is correct (and Applicant does not concede this point), the Office Action does not set forth how claim 27 involves a substitution of equivalents. The Office Action does not indicate what aspect of *Claffery* could have been substituted by an equivalent in *Ramakrishnan* to achieve the computer system of claim 27. In the discussion of substituting equivalents, the Office Action does not refer to any aspect of *Claffery* as being something for which *Ramakrishnan* may provide a substitute.

Applicant also sees no aspect of *Claffery* (or other cited references) that would be substituted by the cited features of *Ramakrishnan* to meet the limitation of computer code configured to cause a processor to "identify pairs of said network elements as being in a first set of network element pairs." The citations to MPEP § 2144.06 and *Smith v. Hayashi* are therefore inapposite, since the Office Action discusses *Ramakrishnan* not as illustrating a substituted element, but rather as providing an element that is absent from the other cited references.

Applicant therefore respectfully submits that identifying pairs of network elements as set forth in claim 27 is not a substitution of a known equivalent, and would not have been obvious to one of ordinary skill in the art at the time the invention was made. For this reason as well, claim 27 and all claims that depend therefrom are allowable under § 103(a). At least for similar reasons, independent claims 40 and 53 and all claims that depend therefrom are also allowable under § 103(a).

The Cited Art Does Not Disclose All the Limitations of the Claimed Invention.

Even if each of the proposed combinations of references were proper, the claimed invention would be allowable over the cited references under § 103(a) because the cited

references, taken either separately or in combination, fail to disclose all the limitations of the claimed invention.

For example, claim 27 is directed to a computer system and includes a limitation of computer code configured to cause a processor to generate a first matrix with **“independent rows and non-independent rows.”** In claim 27, the computer code is also configured to cause the processor to form **a second set of network element pairs that “contains independent network element pairs.”**

Neither *Claffery*, *Ramakrishnan*, *Henderson*, nor *LaFollette* describe or suggest these limitations, among others, of independent claim 27. Indeed, the Applicant sees no use of the properties of independent and non-independent rows of matrices, as set forth in the claims, in any of the cited references.

Still further, in the computer system of claim 27, **each one of the independent pairs of network elements corresponds to a one of the independent rows of the first matrix.** The Office Action states that this limitation is disclosed in *Claffery*. Office Action at 4, para. 10. Applicant respectfully disagrees.

Claffery presents a Link Availability Matrix that indicates the possibility of pairing objects. This table includes entries such as “Always,” “Never,” and “Time Dependent.” *Claffery* at col. 8, lines 15-20. *Claffery* also presents a Cost Matrix “constructed . . . on the basis of the Link Availability Matrix. The Cost Matrix is set up in terms of link weights, such as a weight of 1 to indicate ‘link available’ and a weight of infinity to indicate ‘link not available,’ or a scale of weights assigned on the basis of cost functions such as link distance, link quality, link active/inactive etc.” *Id.* at col. 8, lines 26-33.


The Link Availability Matrix and the Cost Matrix in *Claffery* do not, however, include any correspondence between independent pairs of network elements and independent rows of a matrix. *Claffery* does not suggest, teach, or discuss computer code configured to cause a processor to form a second set of network element pairs that contains independent network element pairs, with each one of the independent pairs of network elements corresponding to a one of the independent rows of a first matrix. Since at least these limitations of the claim are absent from the cited references, claim 27 is allowable under § 103(a).

For similar reasons, the cited references also do not describe or suggest all the limitations of independent claims 40 and 53. Claims 40 and 53 are therefore also allowable under § 103(a). Claims 28-30, 32-36, and 38-39 depend on claim 27. Claims 41-43, 45-49, and 51-52 depend on claim 40. Claims 54-59 depend on claim 53. Accordingly, claims 28-30, 32-36, 38-39, 41-43, 45-49, 51-52, and 54-59 are also allowable for at least the same reasons. The Applicant therefore respectfully requests that the pending rejections under § 103(a) be withdrawn.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5097.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 1, 2005.


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2005 Aug 1
Date of Signature

Respectfully submitted,



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